



## IMPROVE ACCURACY AND REDUCE COSTS

Specim FX10 camera series is designed for industrial and laboratory use. Specim FX10 cameras work in a line-scan mode in the visible and near-infrared (VNIR) area; Specim FX10 in the 400-1000 nm region, and the color optimized Specim FX10c camera in the 400-780 nm region.

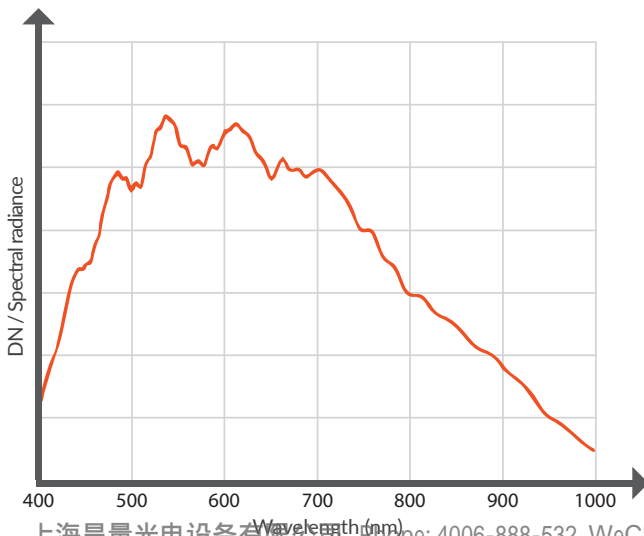
Specim FX10 cameras are best suited for:

- Vegetation & agriculture
- Phenotyping
- Color & density in printing
- Display & light source inspection
- Food quality

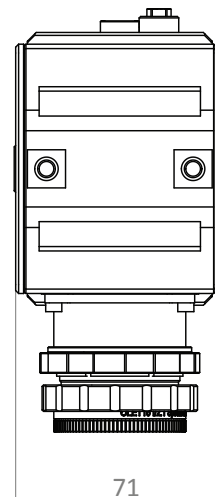
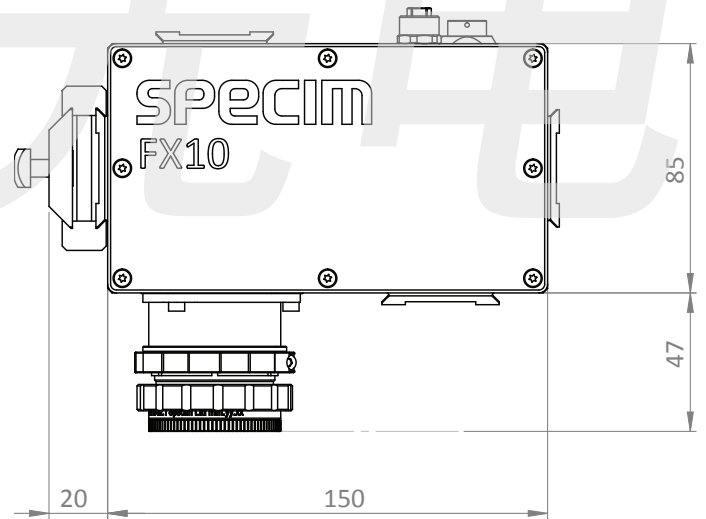
## FEATURES

- Spectral range of 400-1000 / 400-780 nm
- High spatial resolution of 1024 pixels
- High image speed of 330 FPS (full range)
- Free wavelength selection from 224 bands within the camera coverage
- Built-in image correction
- Unified spectral calibration between units
- GigE or CameraLink standard interfaces
- Easy mounting to industrial environment

## SPECTRAL RESPONSE



## DIMENSIONS



|  |   |  |
|--|---|--|
| Spectral Range                               | 400-1000 / 400-780 (c-version)  |  |
| Spectral resolution (FWHM)                   | 5.5 nm (mean)   |  |
| Spectral sampling/pixel                      | 2.7 nm  | With default binning   |
| Spectral bands                               | 224 / 70 (c-version)  | With default binning   |
| Numerical aperture                           | 1.7   | With default lens  |
| Optics magnification                         | 0.80  |  |
| Effective pixel size                         | 19.9x9.97 $\mu$ m   | At fore lens image plane   |
| Effective slit width                         | 42 $\mu$ m  | At fore lens image plane   |
| Effective slit length                        | 10.2 mm   | At fore lens image plane   |
| SNR @ max. signal                            | 420 : 1   |  |
| Spatial samples                              | 1024  |  |
| Bit depth                                    | 12  |  |
| Maximum frame rate                           | 327 FPS full range / 514 FPS full range (c-version)                                     |  |
| Binning                                      | 2,4,8 spectral and spatial  | Default: 2 spectral x 1 spatial  |
| ROI  | Freely selectable multiple bands of interest  | Minimum height of ROI is two 1-binned rows. Maximum frame rate is determined by the total number of rows included in the mMROI's |
| Pixel operability                            | 99.993%   |  |
| Image corrections                            | Non uniformity correction<br>Bad pixel replacement<br>Automatic Image Enhancement (AIE) | One point NUC<br>AIE: Unified spectral calibration + corrected smile and keystone aberrations                                    |
| Sensor material                              | CMOS  |  |
| Sensor cooling                               | Passive   |  |
| Full well capacity                           | 90 ke-  |  |
| Read-out modes                               | IWR / ITR   |  |
| Optics temperature                           | Passive   |  |
| Lens mount                                   | Custom mount  |  |
| Fore lens FOV options                        | 12 deg<br>38 deg (default)<br>47 deg<br>51 deg<br>83 deg                                | Only the default lens is specifically designed for FX10.<br>With other lens options, optical parameters may vary.                |
| Camera digital data output/control interface | GigE Vision, CameraLink   |  |
| Camera control protocols                     | GenICam, ASCII  |  |
| Power input                                  | 12 V DC (+-10%)   |  |
| Power consumption                            | Max 4 W   |  |
| Connectors                                   | Industrial Ethernet OR CameraLink 26-pin, 0.5" MDR                                      |  |
| IP   | IP52  |  |
| Dimensions (L x W x H)                       | 150 x 85 x 71 mm  | Mounting surface option on three sides.<br>Mounting kit adds 24 mm distance on mounting side.                                    |
| Weight                                       | 1.3 kg  |  |
| Storage temperature                          | -20 ... +50°C (non-condensing)  |  |
| Operating temperature                        | +5 ... +40°C (non-condensing)   |  |
| Relative humidity                            | 5% – 95% (non-condensing)   |  |